REMARKS

Claims 1-3, 5-12, 14-21, 23-28, and 30-33 are pending. Claim 1 has been amended to include subject matter of claim 4 and 13. Claim 19 has been amended to include subject matter of claims 22 and 29. Claims 1 and 19 have been amended to recite a detection zone. The dependencies of claims 5, 14, 15, 20, 24, and 30-32 have been amended. Claims 4, 13, 22, and 29 have been canceled without prejudice. Claims 36 and 37 have been withdrawn.

Claims 1-13, 16, 18-30, 32, and 33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wilding et al. (U.S. Pat. No. 5,635,358A) in view of Brody (U.S. Pat. No. 5,726,404 A).

The Office Action states that Wilding discloses an enrichment zone in "the area or volume just before and including filter [28] where material too large to pass through the filter is retained" and "a channel extending downstream from the enrichment zone along a secondary and different pathway, as shown in figure 1 by the fractal detection region (40)."

As presented herein, claim 1 recites a microfluidic device, comprising:

> an enrichment zone to prepare an enriched particle sample from the particle-containing liquid, the enrichment zone comprising a flow-through member configured to allow liquid of the particle-containing liquid to pass along a first pathway through the flow-through member while retaining particles of the particle-containing liquid in the enrichment zone;
>
> a lysing zone disposed downstream of the enrichment zone;
>
> a detection zone disposed downstream of the enrichment zone;
>
> a second, different pathway spaced apart from the flow-through member and leading downstream from the enrichment zone; and
>
> a gas actuator to move the enriched particle sample downstream from the enrichment zone along the second pathway, the enriched particle sample comprising at least some of the retained particles.

Wilding does not disclose or suggest a device with an enrichment zone, lysing zone, and detection zone as recited in claim 1. The Wilding devices have a lysis chamber (22 in FIG. 1 or 22B in FIG. 7) on the opposite side of the alleged enrichment zone as the detection region 40. Material must pass through filter 28 to pass between the lysing chamber 22 (22B) and detection region 40. Claim 1 recites a device in which the lysing zone and detection zone are both located downstream of the enrichment zone. The claimed device includes a second pathway spaced apart from the flow-through member by which particles can pass downstream from the enrichment zone toward the lysing zone and detection zone without passing through the flow-through member.

Brody merely discloses a fluid microswitch.

For at least the foregoing reasons, no combination of Wilding and Brody discloses or suggests the device of claim 1.

Applicants turn next to claim 19, which recites a device comprising:

> an enrichment zone configured to substantially separate an enriched particle sample from the particle-containing liquid;
> a lysing zone disposed downstream of the enrichment zone;
> a detection zone disposed downstream of the enrichment zone;
> an actuator to move the enriched particle sample downstream from the enrichment zone with essentially no dilution of the enriched particle sample.

As discussed above, the Wilding devices include a lysing chamber 22 (or 22B) and fractal detection region 40 located on opposite sides of the alleged enrichment zone. In the device of claim 19, the lysing zone and detection zone are both located downstream of the enrichment zone.

Brody merely discloses a liquid microswitch. For at least the foregoing reasons, no combination of Wilding or Brody discloses or suggests the device of claim 19.

Claims 14, 15, 17, and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wilding and Brody and in further view of Tai (U.S. Pat. No. 6,534,295).

As discussed above, no combination of Wilding and Brody discloses or suggests either of independent claims 1 or 19. Tai merely discloses a cell lysis device and does not provide any of

the disclosure missing from Wilding and Brody. Accordingly, no combination of the cited references discloses the inventions of claims 1 and 19, let alone dependent claims 14, 15, 17, and 31.

In view of the foregoing, it is believed that the rejections have been overcome such that the present claims are in condition for allowance.

No fee is believed due. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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